

April 1, 2004

Dr. George Cooper
Deputy Administrator, Partnership
CSREES/USDA
Washington, D.C. 20250

Dear Dr. Cooper,

Attached please find the FY2003 Annual Report of Accomplishments and the FY2005–2006 Plan of Work Update for Florida A&M University.

This is a joint report for research and extension programs at the university.

If there are any questions regarding these two reports, please feel free to contact me.

Sincerely,

Charles Magee

Charles Magee, Ph.D.
Interim Dean and Director
Land-Grant Programs

Copy: Dr. Lawrence Carter
Dr. Sunil K. Pancholy

FY 2003 Annual Report of Accomplishments/Results and Impact

Florida A & M University

Florida Agricultural and Mechanical University, an 1890 Land- Grant Institution, receives federal research and extension funds under section 1444 (1890 Extension) and 1445 (1890 Research) of the National Agriculture Research, Extension, and Teaching Policy Act of 1977 as amended.

Sections 202 and 205 of the Agricultural Research Extension and Education Reform Act of 1998 requires Florida A & M University to prepare, submit and have an approved 'Plan of Work' (POW) to receive its formula funds for research and extension programs.

To meet the requirements of this congressional mandate, Florida A & M University submitted a joint research and extension POW in 1999, which was approved by CSREES for a period of five years (10/1/99-9/30/2004).

Subsequently, three annual reports (FY 2000, 2001, and 2002) were submitted and approved by CSREES.

This document reports accomplishments, results and impact of research and extension programs for FY 2003 (10/1/02 – 9/30/03).

Planned Programs

The Research and Extension Programs at Florida A & M University jointly planned and implemented several projects in FY 2003. Significant progress was made in further integrating teaching, research and extension activities to address the critical issues in food and agricultural sciences in Florida. Also, joint programs were planned between FAMU Biological Control Program and APHIS/USDA and ARS/USDA. These two agencies are collaborating with Florida A & M University in enhancing research in biological control. The Center for Water Quality received support, both fiscal and programmatic, from NRCS/USDA and FS/USDA. The refocusing of research and extension programs continues to strengthen the land grant mission of the University. The program areas for FY 2003 were as follows:

Goal 1: An Agricultural Production System that is Highly Competitive in the Global Economy

Program Areas

1. Statewide Goat Program
2. Viticulture and Small Fruit Research
3. Diversified/Alternative Agriculture

Goal 2: A Safe and Secure Food and Fiber System

Program Area

4. Herd Health and Food Safety

Goal 3: A Healthy, Well-Nourished Population

Program Area

5. Nutrition, Diet and Health in Florida

Goal 4: Greater Harmony between Agriculture and the Environment

Program Areas

6. Water Quality
7. Biological Control

Goal 5: Enhance Economic Opportunity and Quality of Life for Americans

Program Areas

8. Financial Management and Decision Making
9. Community Resource Development
10. Statewide Small Farm Sustainable Development

Stakeholder Input Process

During FY 2003, stakeholder input was sought and received from multiple sources and at several different levels. These included: small farmers in the state, research and extension clientele, agricultural commodity producers, consumers, environmental groups, private foundations, Florida Department of Agriculture and Consumer Services, county extension workers, and state and federal agencies. On-campus input was received from faculty, staff, and students. The Land-Grant Program Advisory Council continues to provide input for research and extension programs. In FY 2001 and 2002, we reported the formation of advisory committees for research and extension centers in Water Quality, Viticulture and Small Fruits Research, Biological Control and Statewide Goat Program. These committees have been very helpful in addressing the needs within the state and in generating additional support for the centers. Federal agencies such as ARS, APHIS, FS, NRCS, NASS, EPA and others through collaborative projects, provided resources and input into the planning and implementation of research and extension activities at Florida A & M University.

Program Review Process

Florida A & M University has a well established process in place to monitor and review the quality and the accountability of the research and extension programs. These are: review of research proposals by internal and external subject matter specialists,

annual evaluations of faculty's planned research and extension activities, impact of ongoing research activities, stakeholders' input, presentation of scientific papers and publication of annual report of accomplishments.

Recently, the College has embarked upon developing a five-year strategic plan. The plan calls for critical evaluation of all areas by external as well as internal stakeholders. A structured questionnaire asks probing questions concerning the impact of the program. The plan will be ready by the end of summer 2004 and it will guide the future development of all programs within the college.

Evaluation of the Success of Multi- and Joint Activities

The current 'Plan of Work' submitted to CSREES/USDA is a joint plan of work between research and extension. Both areas have significant interaction with the academic program and the International Agricultural Program within the college. In addition, we have made much progress in establishing linkages with various federal and state agencies. The Center for Water and Air Quality is supported by the Natural Resources Conservation Service and Forest Service and the Center for Biological Control is supported by the Agricultural Research Services and the Animal and Plant Health Inspection Service, both of USDA. Scientists from the college work closely with the Scientists from the College of Arts and Sciences and with the ARS-funded FAMU Science Center.

Florida A & M University and the University of Florida Institute of Food and Agricultural Sciences (IFAS) jointly fund several research and extension projects through the Center for Cooperative Agricultural Program (CCAP). The focus of this program is to address the needs of small/ limited resource farmers in Florida.

We continue to have a good working relationship with the Florida Department of Agriculture and Consumer Services (FDACS). Our Center for Viticulture and Small Fruits Research, and the Center for Public Health Entomology Research receive funding from FDACS.

Accomplishment Reports

Goal 1

Program Area 1-Statewide Goat Program

Accomplishments

1. Disseminated 315 publications and training materials related to goat meat production.

2. Established marketing opportunities for local growers to export full blooded Boer Goats to Trinidad. Revenue generated from the first sell exceeded \$10,000.
3. Assisted producers in marketing portable goat sheds. The revenue generated from the sell of sheds - \$4,500.
4. Conducted goat meat training courses, production and management workshops, several group farm visits, fecal examination training and hands-on training at Florida A & M University farm as well as at producers' farms.

Impact

1. Increased educational activities related to animal production and marketing for small and limited resource producers.
2. Nine minority producers adopted 6 or more recommended sustainable goat production practices.
3. Increased farmer participation by 55% in educational activities related to livestock production and management compared to the previous year.
4. Research results showed that a single dose of Cydectin (1ml/22lb), when administered orally, reduced incidence of parasites among the treated animals (goats) significantly. Producers were able to use this information in maintaining a healthy herd of goats.

Program Area 2- Viticulture and Small Fruit Research

Accomplishments:

1. The Center published 18 scientific papers and secured 7 new grants.
2. Initiated a collaborative genomic project with USDA/ARS Horticulture Laboratory in Fort Pierce, FL to sequence and identify viticulturally important genes and markers.
3. Improved protocols for gene transformation and somatic embryogenesis for Florida grapes.
4. Sustained progress of breeding program to evaluate 5,000-7,000 hybrids annually for table grapes and wine making.
5. Developed several transgenic vines with seedless genes for the muscadine grape, Fry.

6. Continued research to identify and isolate disease resistant gene and markers, and proteins responsible for disease resistance and the production of phenolic compounds for Florida grapes.
7. Established a new research vineyard to evaluate trellis systems, canopy management and other cultural practices to improve productive efficiency and fruit quality for Florida grapes.
8. Developed small fruit demonstration and evaluation plot to provide information on cultural practices.
9. Increased extension and outreach services to growers, processors and public-at-large by more than 100%.
10. Attracted international scholars and professionals to study or conduct research at the Center.

Impact:

Through seminars, workshops, demonstrations, on-site assistance and other outreach activities, the center has contributed to increased grower efficiency and acreage of new vineyards. More than 30 acres were established through the Commercial Acreage Program undertaken by the Florida Advisory Council and Florida Department of Agriculture and Consumer Services. The number of Florida wineries has grown by 27% from 11 to 14 and wine production in the state exceeded 230,000 gallons, about 30,000 gallons more than last year.

The Viticulture Program has attracted a number of graduate and undergraduate students who conducted research on various viticultural topics.

Program area 3 – Diversified/Alternative Agriculture

Accomplishments:

The overall goal of the program is to enhance the competitiveness of small-scale farm operations through effective diversification of agricultural enterprises. Overall, over 250 one-on-one contacts have been made with clientele providing valuable information, training and special project activities. Twenty workshops and group training activities, including enterprise and market demonstrations, field day activities and school marketing training for food service personnel, have been conducted in such areas as school and other alternative markets.

Impact:

1. Fifty-seven program participants are now incorporating alternative enterprises, production practices, marketing strategies into existing operations.
2. Eleven small-scale farmers have improved profitability of farm operations through alternative markets, alternative enterprises, value-added production, irrigation use, mechanical harvesting, and production management.
3. Thirty-three school districts, serving over 500,000 school children, in FL, AL, GA, and MS are participating in school lunch program and purchasing agricultural products grown by local small farmers.

The commodities include: green beans, collard greens, peas and pumpkins.

4. Secured market for 20,000 pounds of hot pepper for a sauce company.

Goal 2**Program Area 4 – Herd Health and Food Safety****Accomplishments**

Presented six workshops on Herd Health, Bioterrorism Awareness, and Zoonotic Diseases to various audiences that included Goat Producers (Florida Dairy Goat and Meat Goat Associations), Cattle Producers, Processors, Food Safety and Military Personnel, Educators, Extension Professionals in Leon, Escambia, Jackson, Alachua and Suwannee Counties of Florida.

Impact

The results from the participants showed that awareness increased from 25 – 30 percent to 42 – 50 percent in the post – test of the potential impact that zoonotic disease – causing organisms can have on humans and animals and their role and responsibility in response to bioterrorism. The animal producers, food safety personnel, county paraprofessionals and agents became more aware of on-farm biosecurity needs and learned to incorporate such food safety issues into planning and implementation of various production and processing steps.

Goal 3

Program Area 5 – Nutrition, Diet and Health in Florida

Accomplishments

A basic nutrition program consisting of how to use the Food Guide Pyramid and the Dietary Guidelines to develop healthful meal plans (including snacks) has been developed and presented to limited resource audiences in North Florida. Most seminars consisted of a nutrition seminar and a cooking demonstration that provided an opportunity for participants to taste low-fat dishes. These seminars also included food safety information and food resource management (food shopping). Nutrition classes were taught at health departments, senior centers, elementary schools, to teen parents, and to 4-H participants.

Impact

Youth participating in county nutrition programs were able to make more healthful food choices (including snacks). Some (10) also reported increasing fluid intake (water) and eating breakfast more by the end of the program. Pregnant and teen parents also benefited from our nutrition programs in that they were able to demonstrate that they had learned how to prepare nutritious meals and snacks for their children.

One county with scarce health resources formed a diabetes support group for older adults designed to motivate each other in terms of increasing exercise and taking medication on a regular basis – a resource they did not have before. Other counties sponsored diabetes education programs where they informed participants about all aspects of caring for themselves – including local resources available to them.

Hispanic families learned different ways to use their WIC Vouchers (utilizing farmer's markets to purchase fruits and vegetables) thereby increasing their intake of these foods.

Goal 4

Program Area 6 – Water Quality

Accomplishments

A mobile drinking water laboratory monitored shallow private drinking and domestic water wells and enabled specialist to provide residents with information for keeping their drinking water safe. A “show and tell” field day provided over 200 citizens with information to allow them to make appropriate

decisions regarding the impact of their farming activities on domestic well water quality. The clientele was educated about practices that could enhance the quality of their drinking and domestic water supply. The training sessions provided hands-on experiences towards improving the awareness of the rural populace about water quality.

Impact

Approximately 250 small farmers and rural residents were served. Water quality and environmental education was provided to non traditional and limited resource clientele. Many rural residents are now able to understand basic tests which would indicate whether or not their domestic water supply was safe. Overall, the training resulted in an increased awareness and concern regarding the quality of their drinking water supply.

Program Area 7 – Biological Control

Accomplishments

The focus of our current research is the study of insect behavior and ecology, with an emphasis on plant-herbivore-natural enemy interactions, and the applications of that information to integrated pest management (IPM) programs. Our goal is to develop environmentally and economically sound methods for insect pest and disease management in vegetable and small fruit crops.

To date, we have shown that UV Reflective Mulches significantly reduce the abundance of whiteflies in tomatoes but do not adversely impact levels of parasitism compared with standard mulches. The Yellowmargined Leaf Beetle (*Microthecao chroloma*), a significant pest of organically grown crucifers, is being targeted.

Impact

The UV reflective mulches results have been presented to numerous grower groups and they've significantly increased the use of such plastic materials to control pests. This in turn has reduced the use of chemicals.

Biological control methods have been adopted by several growers to control pest species of Lepidoptera in tomatoes and peppers. In cabbage and related crops, a parasitoid/predator relationship has been employed to control insects.

Program Area 8 – Financial Management and Decision Making

Accomplishments

The specialists at Florida A & M University conducted seven seminars related to financial management for college students, adult head of household and for elderly program participants. These seminars were tailored to the needs of each audience but included asset identification, financial goals, spending plans needed to reach these goals, and credit management. Four hundred and sixty individuals attended these seminars.

The extension staff conducted four two and one half hour housing seminars for the first time home buyers. One hundred twenty five individuals attended the seminars.

Impact

All of the program participants in the financial management seminars were able to articulate their short, medium and long-term financial goals. After the seminars, at least 60 percent of our participants were able to describe the basic financial and credit terms. Some of the participants sought assistance with debt loads and were able to lower their interest rates.

Largely because of the efforts of Extension personnel and collaboration with other county agencies, seven participants qualified for new homes and 14 had their original homes replaced because the homes could not be rehabilitated. Four participants received free landscaping materials and assistance from the University.

Program Area 9 – Community Resource Development

Accomplishments

The Community Resource Development (CRD) Program has provided technical assistance to individuals in the form of developing business plans, marketing plans, financial statements, and/or loan packaging as a means of promoting economic development. The program staff has worked with individuals to develop start-up businesses and expand existing businesses in Leon and surrounding counties. The CRD Program has also developed a collaborative partnership and/or working relationship with entities to address the needs of minorities and underserved clientele.

Impact

Eighty-four (84) persons attended workshops or conferences where they received information concerning starting and managing a business, preparing a

business plan, and small business loan opportunities. Seven individuals requested and received one-on-one assistance with developing business plans, preparing financial statements and/or preparing loan packages of which two actually submitted loan packages for funding of a new business. As a result of this six new jobs were created.

Program Area 10 – Statewide Small Farm Sustainable Development

Accomplishments

This year saw the continuation of demonstration plots to examine the adaptability and market potential of alternative tropical crops such as Pigeon Peas and hot peppers. Studies were conducted to investigate the effect of planting date,

since the crop (pigeon pea) is highly sensitive to day length. Studies were also conducted on Scotch Bonnet and Caribbean Red Hot Peppers to determine the effect of organic sources of nutrients on the sustainable production of the hot pepper varieties.

Impact

The program continues to impact farmers, both statewide and nationwide. Field demonstrations and tours during a “show and tell” field day in September 2003, have helped in maintaining farmers’ interest in the program. New farmers continue to enroll. In 2003, three new farmers received 1,500 hot peppers seedlings to get them started with their small farm operations. Previously enrolled farmers now possess the necessary skills to produce and manage their own crops successfully. Two of these farmers have reported gross receipts in excess of \$25,000 within 13 weeks of harvesting from relatively small land areas. This year, approximately 30 farmers were provided technical assistance either on site or by telephone and now the program is being extended to South Florida.

**Summary Table
Expenditures of Federal Funds
By Goals**

**Florida A & M University
FY 2003**

| | Research | Extension |
|--------------|--------------------|--------------------|
| Goal 1 | \$379,998 | \$493,789 |
| Goal 2 | \$264,707 | \$155,819 |
| Goal 3 | \$182,176 | \$192,543 |
| Goal 4 | \$468,628 | \$118,024 |
| Goal 5 | \$118,960 | \$258,417 |
| Total | \$1,414,469 | \$1,218,592 |

Grand total of Research and Extension funds is **\$2,633,061** (spent).